

ABSTRACT OF THE DISCLOSURE

An internal combustion engine has a variable valve actuation device for lifting an intake valve. The device is capable of changing the amount of opening of the intake valve. The device is configured to calculate a first estimated value G_{ao} of the amount of intake air from a parameter regarding the operation state of the engine at the time of opening the intake valve; calculate a second estimated value G_{ac} of the amount of intake air from a parameter regarding the operation state of the engine at the time of closing the intake valve; and calculate an actual amount of intake air G_a based on the first estimated value and the second estimated value.

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